

Overview of Maths in Primary: Six Key Principles

By following the Mastery approach to learning Maths, we ensure that children are challenged through our curriculum design. Our slip approach ensures that all children understand the basic concepts before progressing onto more challenging material. By not restricting children to 'easier' work, we allow all children to achieve their best.

- We follow a Mastery approach to Mathematics which ensures that all children are provided with equal opportunities to succeed through high expectations and appropriate scaffolding. We do not set classes, and work is only differentiated for SEND/Pre-Key Stage children who are working significantly behind age-related expectations. We believe that everyone can succeed.
- We use the White Rose Maths premium worksheets as a basis to create three small 'slips' for children to work through each lesson. Task design ensures that children are both scaffolded and challenged throughout.
- Each slip should include a challenge sourced from high-quality materials (Deepening Understanding, NRich, OpenMiddle ISeeReasoning) to inspire our most-able children to thrive as mathematicians.
- Lessons are delivered through a CPA approach when introducing and securing new concepts using a range of manipulatives. Each class have their own set of equipment to access each lesson.
- High emphasis is placed on fluency and arithmetic skills through daily tough tens, fluency tracking, regular arithmetic tracking and a high profile of Times Tables using Times Tables Rock Stars.
- Teacher feedback enables children to make progress through the identification of gaps in skills and/or knowledge. Once misconceptions are acknowledged, teachers implement swift interventions.

We recognise that feedback is most valuable when it is provided live in the lesson from an adult. Children know to respond to this in purple pen.

Self-Feedback: From Year 2, children begin to mark their own work using marking stations, learning to develop their independence when seeking further support from adults. If children are incorrect, they are expected to correct their work in purple pen.

Teacher Feedback: Through a combination of live-marking within the lesson and looking at children's books, teachers should be able to identify which children need further support and intervene where necessary through quick 'mop up' sessions, ideally delivered before the next lesson.

Peer feedback is used less frequently in Maths however children are provided opportunity to work collaboratively in mixed ability pairs/groups in which feedback to each other is naturally ongoing.

High Expectations for Presentation

Year 1: Stickers used in Maths books for date/question. Tough Ten and White Rose questions to be stuck in in a scrapbook style.

Year 2 onwards: 2/3cm margin drawn with a ruler on the left. Short date and question written in and underlined.

- Tough ten on the left, working out on the right.
- Work completed in pencil. Purple pen to self-mark only. Teacher feedback in green.
- Each slip glued in straight with workings out and reasoning explanations written underneath.
- All space on the page used where possible. One digit per square.
- Any arithmetic tasks to be completed in the back of books.

Children should be modelled these expectations. Children know the value of neat presentation and how this makes calculation easier – especially with formal methods.

Children should show **pride** in their work and their books should reflect this.



Closely following the White Rose Maths scheme of work, children are taught concepts in 'blocks' which consist of small steps of learning which lead to children developing a full understanding of a concept over time. These are designed so that children revisit and build on previous learning. If a skill needs re-learning, teachers have the freedom to re-teach concepts, so children are secure in the fundamental before progressing. Teachers have flexibility as to how long each step should take their class – one step is not necessarily a lesson. One step may take a series of lessons, or a couple of steps may be combined into one lesson to meet the needs of the learners.

Every lesson begins with a 'tough ten' – ten arithmetic questions to get children focused on their learning straight away. Children are engaged through a CPA approach within the lesson and scaffolded through small steps to grasp concepts so they can work independently. More able children are encouraged to begin independent work earlier in the lesson if appropriate to ensure their time in lesson is maximised. Lessons finish with a final question, reflection, game, or retrieval practice activity either based on the lesson's learning or prior learning.

High Productivity & Pace

- Productivity and pace should be high throughout Maths lessons as children are engaged through an *I do, we do, you do* model as part of the CPA approach to learning.
- Due to the self-marking stations, children should always be on task, moving on their own learning without relying on immediate teacher feedback. Children should know they can refer to manipulatives and working walls for support if they are finding work tricky. The majority of the class are expected to complete the tough ten and at least the first two slips within a lesson.

Our self-marking stations develop children's resilience and independence, enabling them to reflect on themselves as a learner and identify what they need to do to improve and learn from their mistakes - without the need for immediate teacher feedback. Children love 'Tiny' – the White Rose mascot who always makes mistakes. Through use of 'Tiny questions', children learn to appreciate their mistakes, building their resilience and taking away the 'worry' around getting something wrong. In Years 5 and 6, Sparx Maths is used to consolidate learning at home, which helps prepare children for Year 7 and beyond.